

WHAT IS CLAIMED IS:

1. A rotary actuator assembly comprising:
an actuator;
at least one piston movable in response to the actuator;
a longitudinally-extending flexible member attached to the piston;
a set attached to the flexible member at one location; and
a pinion engagable with the set such that when the flexible member moves, so too does the pinion.
2. The rotary actuator assembly of Claim 1, wherein the actuator is pneumatic.
3. The rotary actuator assembly of Claim 1, wherein movement of the pinion is rotational.
4. The rotary actuator assembly of Claim 1, wherein the flexible member conforms to a portion of the pinion.
5. The rotary actuator assembly of Claim 1, wherein the flexible member is a cable.
6. The rotary actuator assembly of Claim 5, wherein a piston is attached to opposed portions of the cable.
7. The rotary actuator assembly of Claim 6, wherein the set is a bearing member.

8. The rotary actuator assembly of Claim 7, wherein the pinion comprises a cavity to receive the bearing member and a pathway to receive at least a portion of the cable.

9. The rotary actuator assembly of Claim 1, wherein the movement of the piston is linear and the movement of the pinion is arcuate.

10. The rotary actuator assembly of Claim 8, wherein the movement of the pinion is rotational.

11. The rotary actuator assembly of Claim 1, further comprising a stop engagable with the pinion to limit movement of the same.

12. The rotary actuator assembly of Claim 1, comprising a seal located between the set and the piston.

13. The rotary actuator assembly of Claim 12, wherein the flexible member is disposed through the seal.

14. The rotary actuator assembly of Claim 13, wherein a portion of the seal forms a seal between itself and the flexible member when the piston moves in response to the actuator.

15. The rotary actuator assembly of Claim 11, further comprising an adjustable member that is selectively movable relative to the pinion and engagable with the same.

16. The rotary actuator assembly of Claim 15, wherein the adjustable member is engagable with the stop to prevent backlash on the set and pinion.

17. The rotary actuator assembly of Claim 5, wherein the cable is aircraft cable.
18. A rotary actuator assembly comprising:
 - an actuator;
 - a longitudinally-extending, flexible member that moves linearly in response to the actuator; and
 - a pinion fixed to the flexible member;wherein linear movement of the flexible member translates into rotational movement of the pinion.
19. The rotary actuator assembly of Claim 18, wherein the flexible member comprises a fastener attached thereto which affixes to the pinion to cause the pinion to pivot.
20. The rotary actuator assembly of Claim 18, wherein the actuator is pneumatic.
21. The rotary actuator assembly of Claim 18, wherein a piston is attached to opposed portions of the flexible member.
22. The rotary actuator assembly of Claim 19, wherein the fastener is a bearing member.
23. The rotary actuator assembly of Claim 22, wherein the pinion comprises a cavity to receive the bearing member and a pathway to receive at least a portion of the flexible member.
24. The rotary actuator assembly of Claim 18, further comprising a stop engagable with the pinion to limit movement of the same.

25. The rotary actuator assembly of Claim 21, comprising a seal located between the fastener and the piston.

26. The rotary actuator assembly of Claim 25, wherein the flexible member is disposed through the seal.

27. The rotary actuator assembly of Claim 26, wherein a portion of the seal forms a seal between itself and the flexible member when the piston moves in response to the actuator.

28. The rotary actuator assembly of Claim 24, further comprising an adjustable member that is selectively movable relative to the pinion and engagable with same.

29. The rotary actuator assembly of Claim 28, wherein the adjustable member is engagable with the stop to prevent backlash on the bearing and the pinion.

30. The rotary actuator assembly of Claim 18, wherein the flexible member is a cable.

31. A rotary actuator assembly comprising:
a housing;
a pinion located in the housing, wherein the pinion is rotatable relative to the same;
a cable, at least a portion of which is disposed in the housing and circumferentially engagable with the pinion;
a first piston engagable with one end of the cable; and
a second piston engagable with another end of the cable;
wherein the first and second pistons are movable linearly to cause the pinion to rotate.

32. The rotary actuator assembly of Claim 31, wherein the first and second pistons are disposed in first and second chambers, respectively, and wherein fluid is deposited in the first and second chambers to move the first and second pistons linearly.

33. The rotary actuator assembly of Claim 32, wherein the pistons move linearly in alternate directions within the chambers.

34. The rotary actuator assembly of Claim 33, wherein at least a portion of the cable is attached to the pinion so alternate linear movement of the pistons translates into alternate rotational movement of the pinion.

35. The rotary actuator assembly of Claim 31, wherein the cable wraps around a portion of the pinion.

36. The rotary actuator assembly of Claim 35, wherein a fastener attaches the cable to the pinion.

37. A rotary actuator assembly comprising:
a selectively rotatable body;
a flexible, longitudinally-extending means for engaging and selectively rotating the rotatable body; and
an actuation means that moves the longitudinal extending means for rotating the rotatable body.

38. The rotary actuator assembly of Claim 37, further comprising a sealing means located about a portion of the longitudinally-extending means.